

Date: Monday, 15/12/2008 11:03:25 AM
User: Melanie Fauteux

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : WEARPLATE
Job Number : 44082	
Estimate Number : 10437	
P.O. Number :	Part Number : D33191
This Issue : 15/12/2008 S.O. No. :	Drawing Number : D3319 REV. B
Prsht Rev. : NC	Project Number : N/A
First Issue : / / Type : SMALL /MED FAB	Drawing Revision : B
Previous Run : 43723	Material :
Written By :	Due Date : 22/12/2008 Qty: 12 Um: Each
Checked & Approved By : <u>MF 08-12-15</u>	
Comment : Est: B 05.10.14 Added step 9, dwg rev B KJ/EC Est Rev:C Now on Waterjet 06-10-26 JLM	

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	M1010S18GA	1010/1025 SHEET .048
-----	------------	----------------------



Comment: Qty.: 0.6594 sf(s)/Unit Total: 7.9128 sf(s)

1010/1025/A21/6aA SHEET .048

Batch: 109448 B 8-12-22

2.0	WATER JET	FLOW WATER JET
-----	-----------	----------------



Comment: FLOW WATER JET

1-Cut as per Dwg D3319

Dwg Rev: B B 8-12-22

Prog Rev: B

2-Deburr if necessary B 8-12-22

(12)

3.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
-----	-----	--



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

B 8-12-22

4.0	QC8	SECOND CHECK
-----	-----	--------------



Comment: SECOND CHECK

08-12-22 (12)

5.0	SMALL FAB 1	SMALL & MEDIUM FAB RESOURCE 1
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Comment: SMALL & MEDIUM FAB RESOURCE 1

Deburr if necessary

done at step 12

M/A W

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 15/12/2008 11:03:26 AM
User: Melanie Fauteux

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: WEARPLATE

Job Number: 44082

Part Number: D33191

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

BRAKE NC

NC BRAKE



Comment: NC BRAKE

1- Form using DT8326 & DT8261 as per Dwg D3319 Rev: B

2- Form flat on press using DT8776 block

SB 8/12/23 (12)

7.0

QC6

DIMENSIONAL CHECK



Comment: DIMENSIONAL CHECK

206.12.23

8.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1- Layout weld location as per Dwg D3319 using jig D3319-1T3

2- Weld hard surface using D3319-1T2 per QSI 004 and Dwg D3319 Rev: B

Qty Part Number Description Batch

A/R N/A

7560 Hardcoat Rod

Batch M109560

FL 8-12-24 (12)

9.0

QC10

VISUAL INSPECTION OF GROUND WELDS



Comment: VISUAL INSPECTION OF GROUND WELDS

208/12/29 (12)

10.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

205.12.29 (12)

11.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat Grey Sandtex (Ref: 4.3.5.6) as per QSI 005 4.3

START TIME:

15:10

OVEN TEMPERATURE:

320°

FINISH TIME:

3:40

FL 09/06/05

(12)

12.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT

HL 09-06-01

(13)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 15/12/2008 11:03:26 AM
User: Melanie Fauteux

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: WEARPLATE

Job Number: 44082

Part Number: D33191

Job Number:



Seq. #:

Machine Or Operation:

Description :

13.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify on inside surface using a permanent fine point marker with the following:

TCCA-PDA, Dart Aerospace Ltd.

P/N: D3319-1, B/N: BXXXXX

For Product Eligibility see PDA05-18

and Stock

Location: _____

ST496

JS 09/01/07

(12)

14.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

JS 09/01/07

(12)

Job Completion



u 29.01.07

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

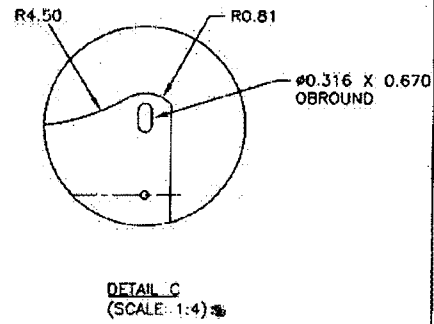
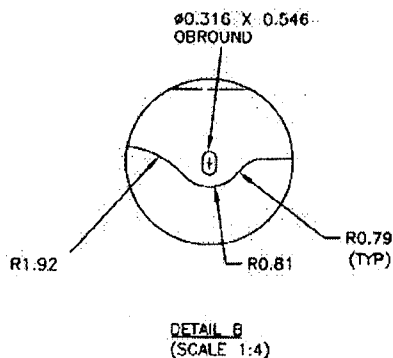
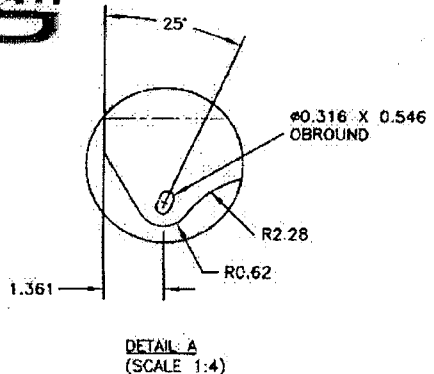
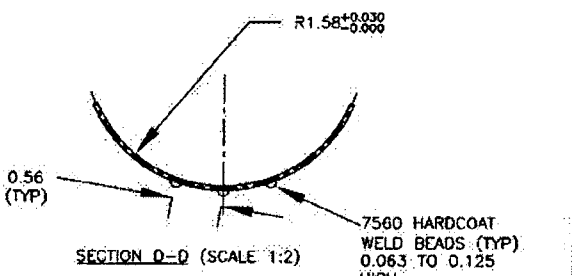
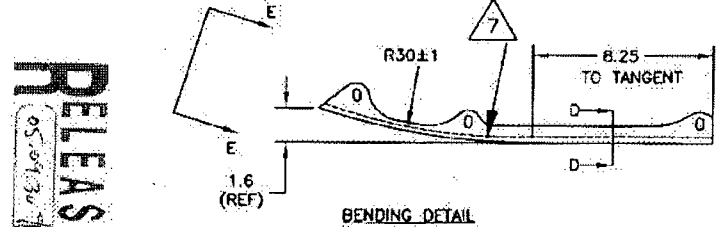
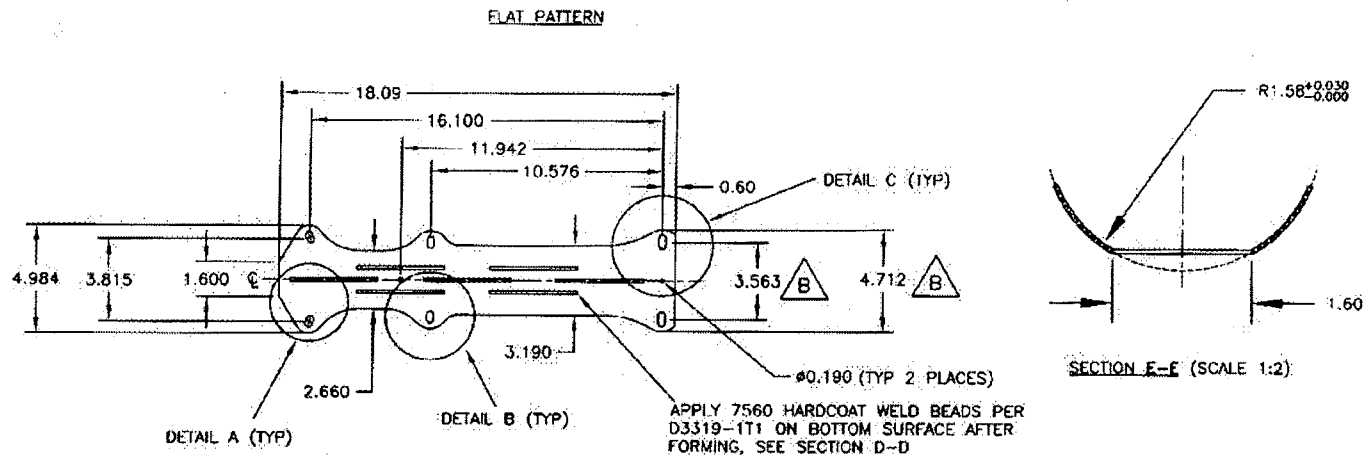
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART

REFERENCE ONLY

DESIGN	DRAWN BY	DART AEROSPACE LTD
P11	04	HAMMESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO.
		D3319
DATE	TITLE	REV. B
05.06.06	WEARPLATE	SHEET 1 OF 5
A	04.09.24	NEW ISSUE
B	05.06.06	WIDEN HOLES, REDUCE WIDTH -3/-5/-7
		SCALE 1:8



D3319-1 WEARPLATE

- 1) MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A1008 OR CSA G40-21, 38W/44W/50W/60W/70W SERIES STEEL 18 GAUGE (0.048 THICK)
- 2) FINISH: POWDER COAT GREY SANDTEX (REF.4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) PART IS SYMMETRICAL ABOUT CENTERLINE
- 5) ALL DIMENSIONS IN INCHES
- 6) WELD PER DART QSI 004
- 7) IDENTIFY ON INSIDE SURFACE AS INDICATED USING FINE POINT PERMANENT INK MARKER:
"TCCA-PDA, DART AEROSPACE LTD., P/N D3319-1 B/N BXXXXX, FOR PRODUCT ELIGIBILITY SEE PDA05-18"

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RELEASED
05.09.06

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

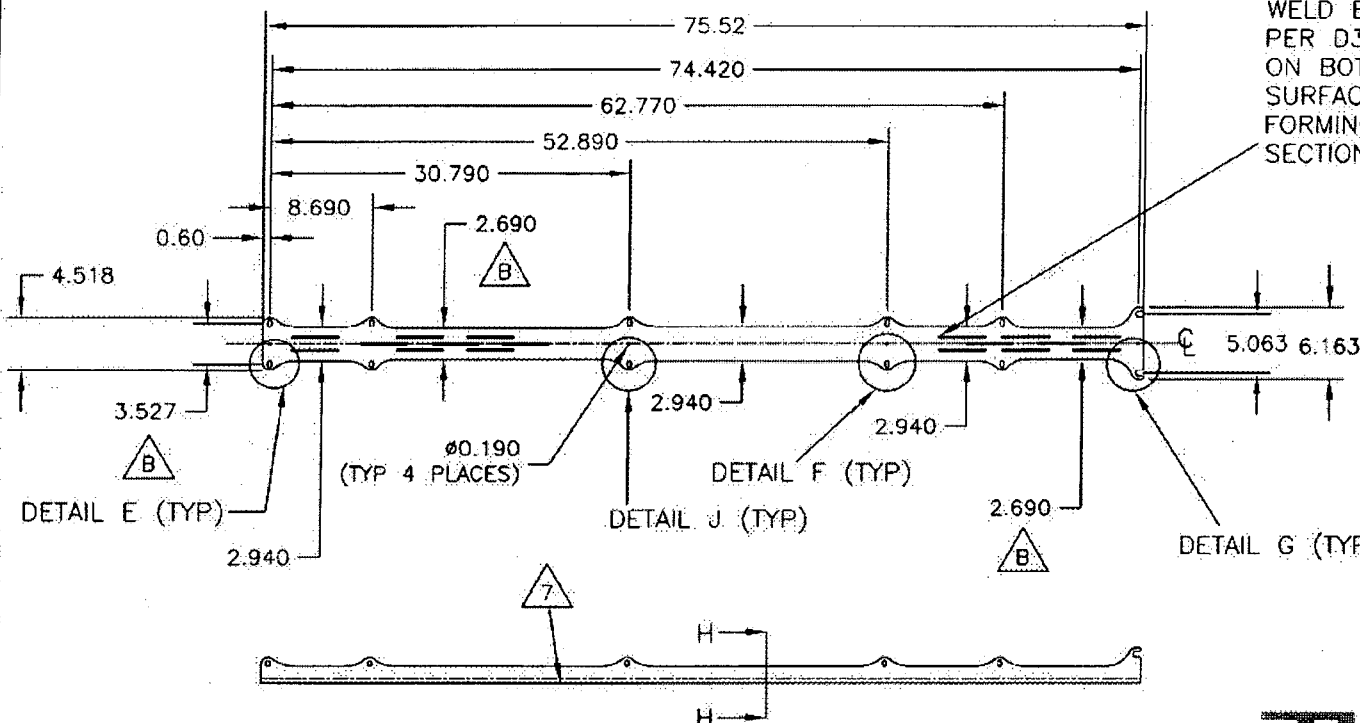
DART

REFERENCE ONLY

DESIGN	DRAWN BY	DART AEROSPACE LTD
CHECKED	APPROVED	HAWKESBURY, ONTARIO, CANADA
DATE	TITLE	REV. B
05.06.06	WEARPLATE	SHEET 2 OF 5
		SCALE
		1:15

APPLY 7560
HARDCOAT
WELD BEADS
PER D3319-3T1
ON BOTTOM
SURFACE AFTER
FORMING, SEE
SECTION H-H

FLAT PATTERN



BENDING DETAIL

D3319-3 WEARPLATE

- 1) MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A1008 OR CSA G40-21, 38W/44W/50W/60W/70W SERIES STEEL 18 GAUGE (0.048 THICK)
- 2) FINISH: POWDER COAT GREY SANDTEX (REF.4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) PART IS SYMMETRICAL ABOUT CENTERLINE
- 5) ALL DIMENSIONS IN INCHES
- 6) WELD PER DART QSI 004
- 7) IDENTIFY ON INSIDE SURFACE AS INDICATED USING FINE POINT PERMANENT INK MARKER:
"TCCA-PDA, DART AEROSPACE LTD., P/N D3319-3 B/N BXXXXX,
FOR PRODUCT ELIGIBILITY SEE PDA05-18"

RELEASED

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

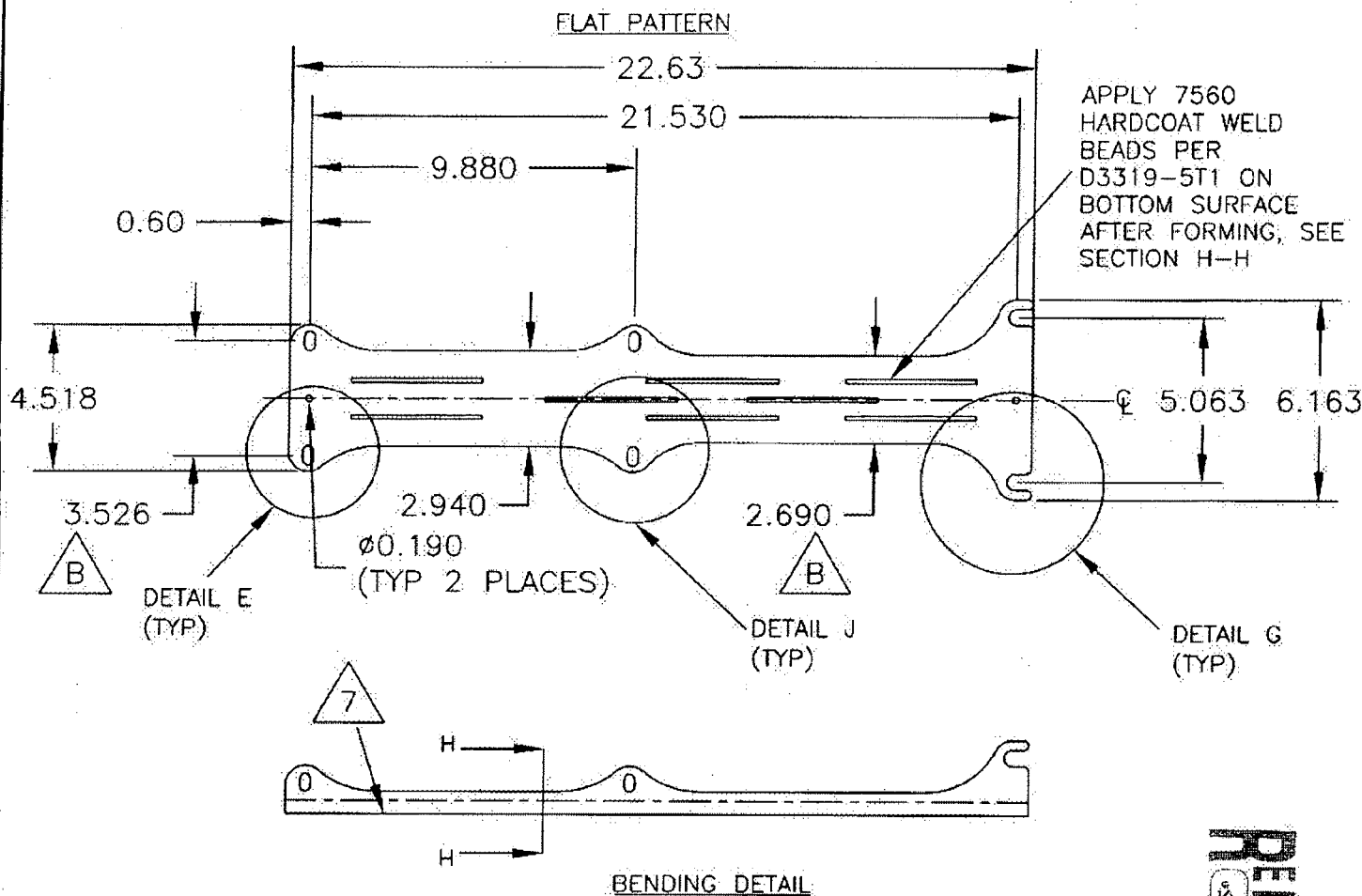
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART

DESIGN	D31	DRAWN BY	DART AEROSPACE LTD HAMKESBURT, ONTARIO, CANADA
CHECKED	#	APPROVED	REV. B
DATE	05.06.06	DRAWING NO.	D3319
		TITLE	WEARPLATE
		SHEET	3 OF 5
		SCALE	1:5

REFERENCE ONLY**RELEASED**
05.07.30-110**D3319-5 WEARPLATE**

- 1) MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A1008 OR CSA G40-21, 38W/44W/50W/60W/70W SERIES STEEL 18 GAUGE (0.048 THICK)
- 2) FINISH: POWDER COAT GREY SANDTEX (REF.4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) PART IS SYMMETRICAL ABOUT CENTERLINE
- 5) ALL DIMENSIONS IN INCHES
- 6) WELD PER DART QSI 004
- 7) IDENTIFY ON INSIDE SURFACE AS INDICATED USING FINE POINT PERMANENT INK MARKER:
"TCCA-PDA, DART AEROSPACE LTD., P/N D3319-5 B/N BXXXXX,
FOR PRODUCT ELIGIBILITY SEE PDA05-18"

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

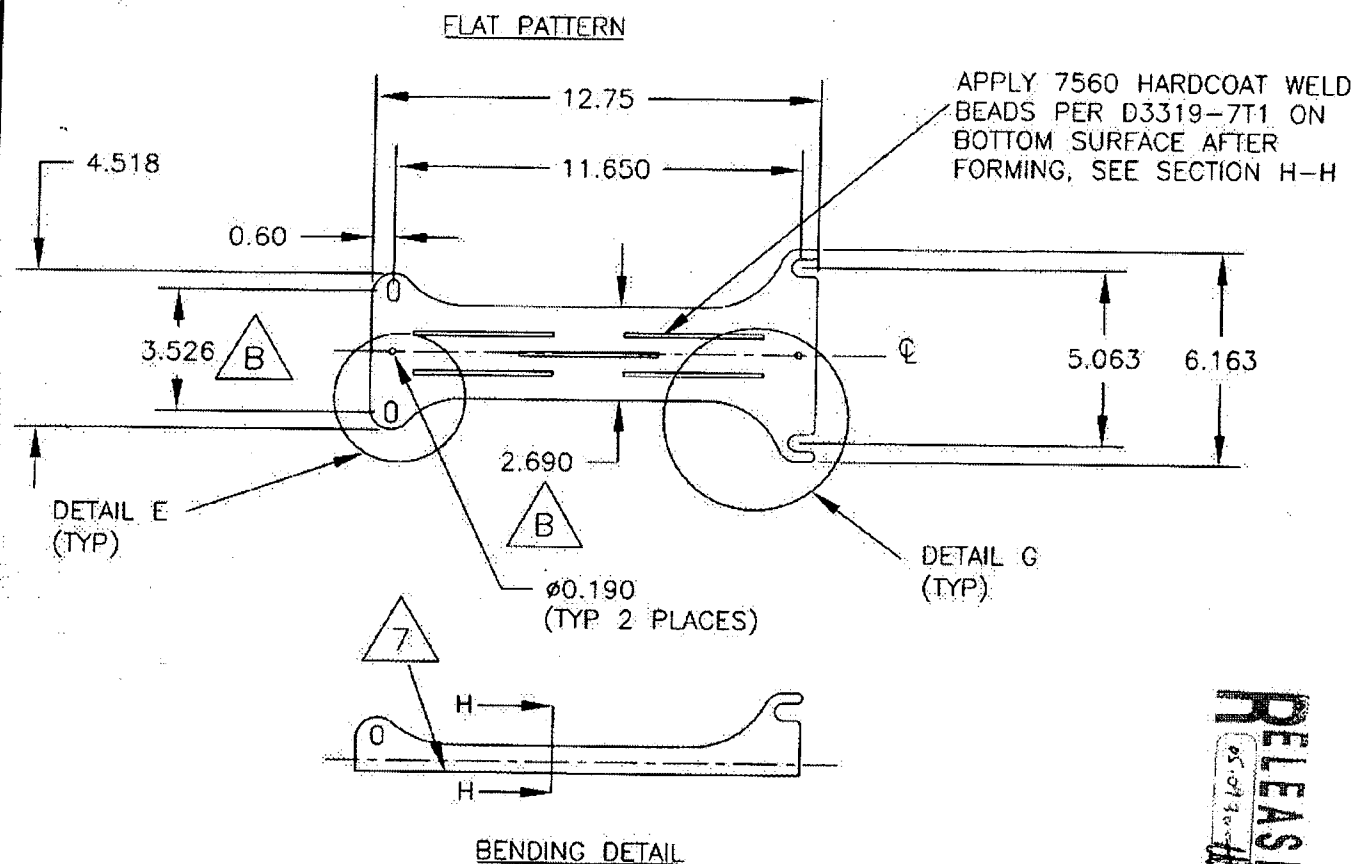
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART



DESIGN	DRAWN BY	DART AEROSPACE LTD
PH	PH	HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO.
PH	PH	D3319
DATE	TITLE	REV. B
05.06.06	WEARPLATE	SHEET 4 OF 5
		SCALE
		1:5

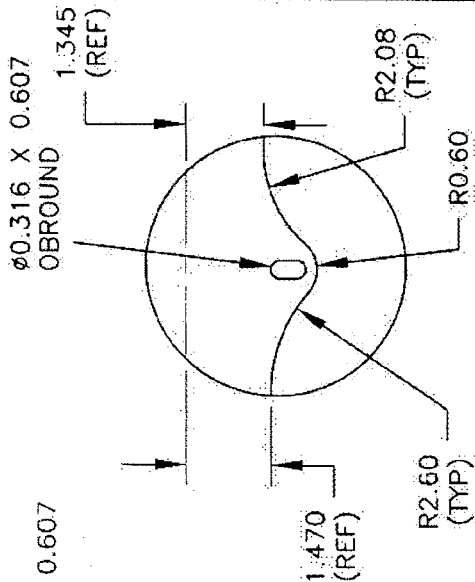
REFERENCE ONLY

D3319-7 WEARPLATE

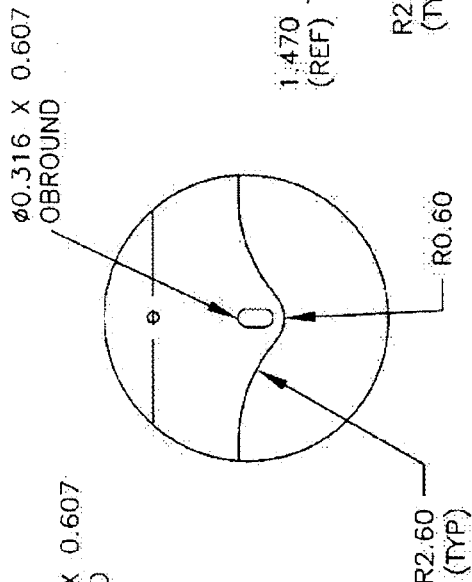
- 1) MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A1008 OR CSA G40-21, 38W/44W/50W/60W/70W SERIES STEEL 18 GAUGE (0.048 THICK)
- 2) FINISH: POWDER COAT GREY SANDTEX (REF.4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) PART IS SYMMETRICAL ABOUT CENTERLINE
- 5) ALL DIMENSIONS IN INCHES
- 6) WELD PER DART QSI 004
- 7) IDENTIFY ON INSIDE SURFACE AS INDICATED USING FINE POINT PERMANENT INK MARKER:
"TCCA-PDA, DART AEROSPACE LTD., P/N D3319-7 B/N BXXXXX,
FOR PRODUCT ELIGIBILITY SEE PDA05-18"



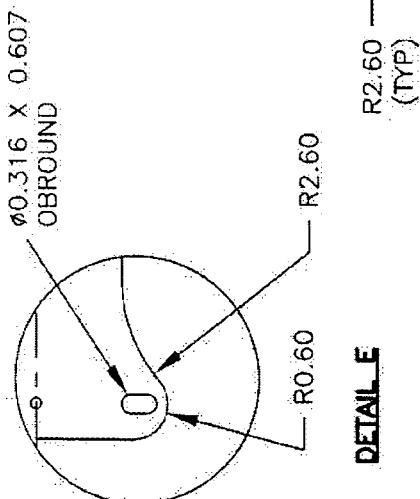
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CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. D3319	REV. B SHEET 5 OF 5
DATE 05/06/06	TITLE WEARPLATE		SCALE 1:3



DETAIL J



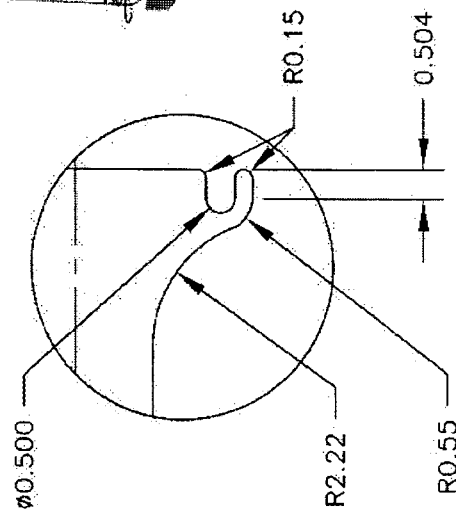
DETAIL F



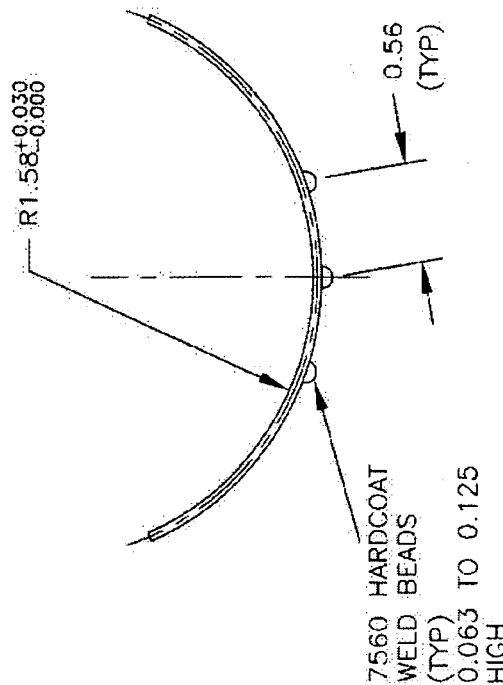
DETAIL E

RELEASED
05-09-30

REFERENCE ONLY



DETAIL G



SECTION H-H
(SCALE 1:1)

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DART AEROSPACE LTD		Work Order:	44082
Description: Wearplate		Part Number:	D3319-1
Inspection Dwg: D3319	Rev: B	Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
4.984	+/-0.010	4.979	X			
1.600	+/-0.010	1.600	X			
2.660	+/-0.010	2.662	X			
3.190	+/-0.010	3.192	X			
3.563	+/-0.010	3.560	X			
4.712	+/-0.010	4.710	X			
0.60	+/-0.030	0.597	X			
10.576	+/-0.010	10.578	X			
11.942	+/-0.010	11.943	X			
18.09	+/-0.030	18.09	X			
Ø0.316 x 0.546	+0.006/-0.001 x +/-0.010	0.317 x 0.548	X			
Ø0.316 x 0.670	+0.006/-0.001 x +/-0.010	0.318 x 0.672	X			
Ø0.190	+0.005/-0.001	0.194	X			

Measured by: IB	Audited by: [Signature]	Prototype Approval:	N/A
Date: 8-12-22	Date: 8-12-22	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	07.05.31	New Issue	KJ/JLM	[Signature]

Date: Tuesday, 24/02/2009 8:26:03 AM
 User: Melanie Fauteux

Process Sheet

Customer	: CC-DAR01 Dart Aerospace Ltd.	Drawing Name	: D3319
Job Number	: 46033		
Estimate Number	: 10804		
P.O. Number	:	Part Number	: D33191
This Issue	: 24/02/2009 S.O. No. :	Drawing Number	: R09-014
Prsht Rev.	: NC	Project Number	:
First Issue	: / / Type : SMALL /MED FAB	Drawing Revision	:
Previous Run	: 00015	Material	:
Written By	:	Due Date	: 03/03/2009 Qty: 1 Um: Each
Checked & Approved By	: <u>MF 09-02-24</u>		
Comment	:		

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

1.0 QC

QUALITY CONTROL



Comment: QUALITY CONTROL

Qty 1 D3319-3 B43724 is scrap. Aft hole is torn upon installation.
 Scrap and destroy.

*** To be reworked***

2x D3319-1 original B44082
 1x D3319-3 original B43724

209-02-24

SS 09/04/24 (X3)

2.0 HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Strip the following items, and re-powder coat Grey per QSI005 4.3.5.6 => 09-04-23 (1)

2x D3319-1
 1x D3319-3

Start time: *2:30*Oven temp: *320°*Finsih time: *3:00*

BR 09-04-23 (1)

3.0 QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

FL 09/04/23 (1)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Process Sheet

Customer: CC-DAR01 Dart Aerospace Ltd.

Drawing Name: D3319

Job Number: 46033

Part Number: D33191

Job Number:



Seq. #:

Machine Or Operation:

Description :

4.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1 *original B/N*
Identify the items with this new batch # and return to stock:

u Location: *ST 497*

5.0

QC21

FINAL INSPECTION/W/O RELEASE



u Comment: FINAL INSPECTION/W/O RELEASE
attach copy of this with each original B/N

09/04/30

Job Completion



mf
09-04-30

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

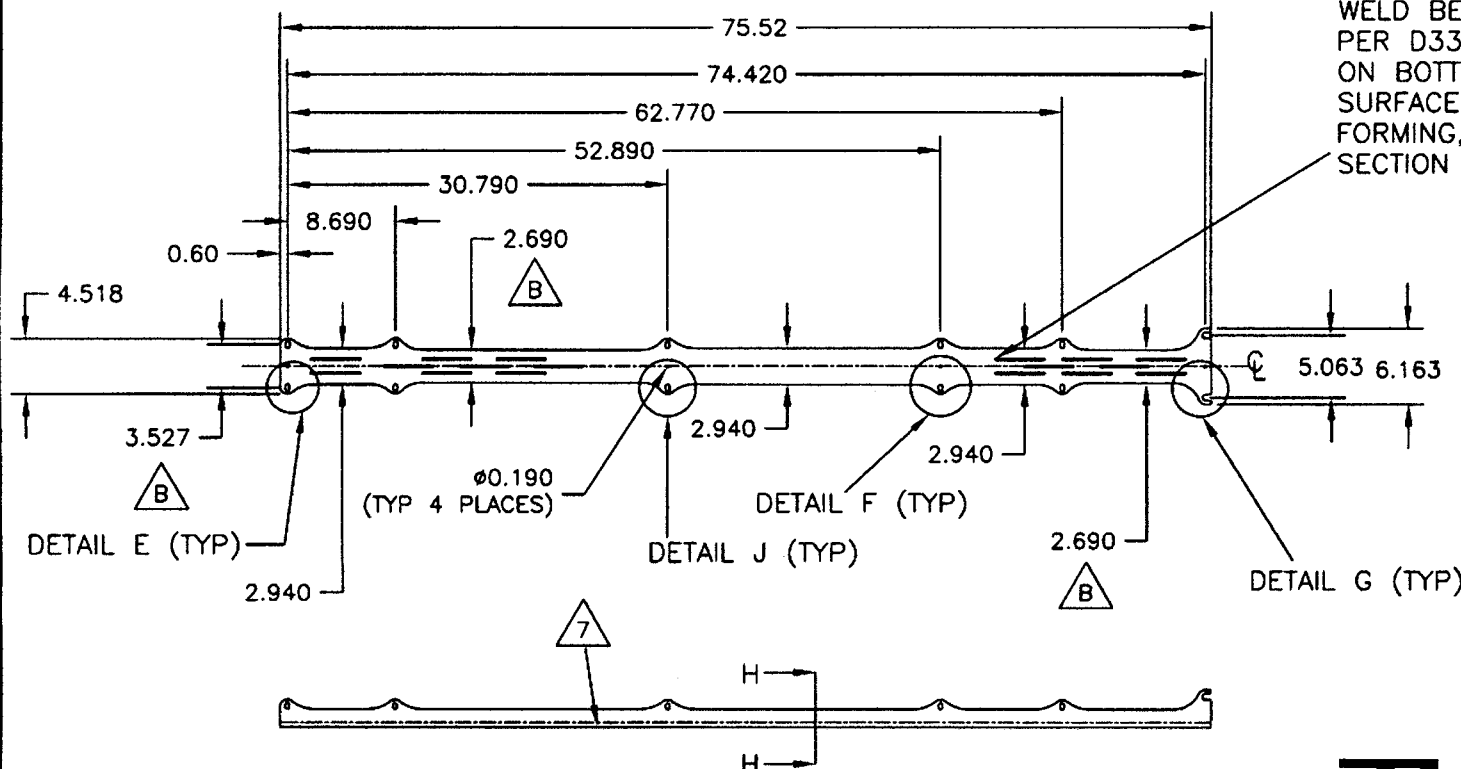
NOTE: Date & initial all entries

DART

DESIGN	BY	DRAWN BY	DART AEROSPACE LTD
CHECKED	BY	APPROVED	HAWKESBURY, ONTARIO, CANADA
DATE	05.06.06	DRAWING NO.	D3319
		TITLE	WEARPLATE
		SCALE	1:15
		SHEET 2 OF 5	REV. B

APPLY 7560
HARDCOAT
WELD BEADS
PER D3319-3T1
ON BOTTOM
SURFACE AFTER
FORMING, SEE
SECTION H-H

FLAT PATTERN



BENDING DETAIL

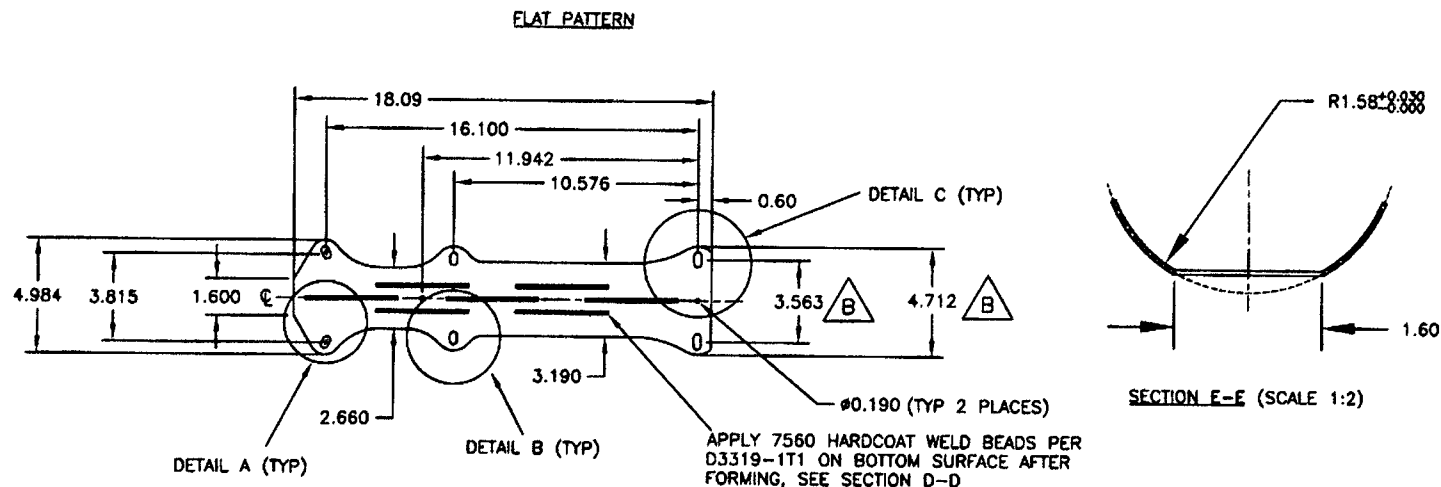
46033

D3319-3 WEARPLATE

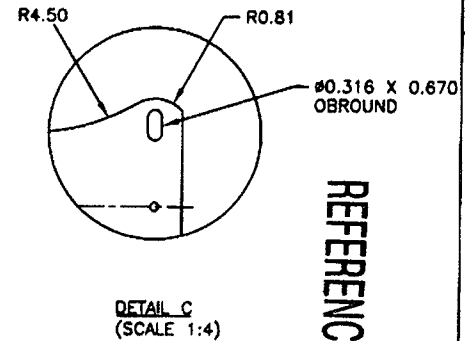
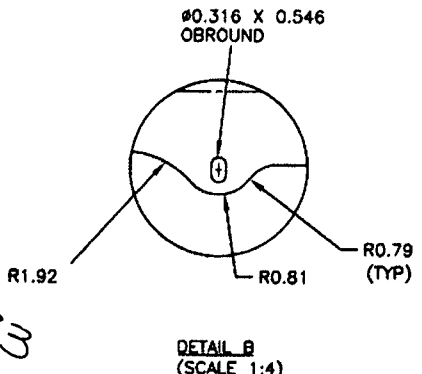
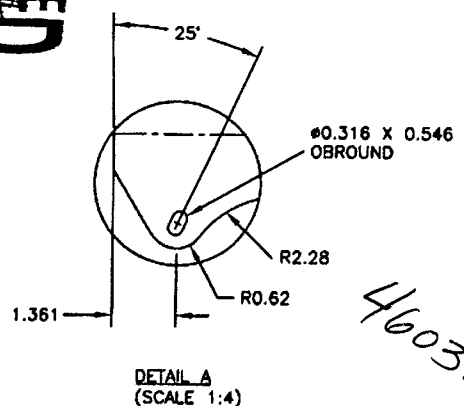
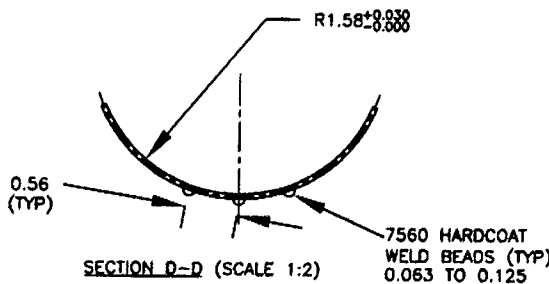
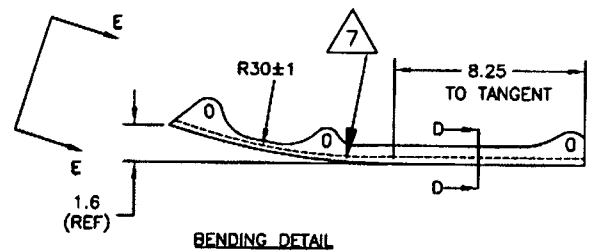
- 1) MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A1008 OR CSA G40-21, 38W/44W/50W/60W/70W SERIES STEEL 18 GAUGE (0.048 THICK)
- 2) FINISH: POWDER COAT GREY SANDTEX (REF.4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) PART IS SYMMETRICAL ABOUT CENTERLINE
- 5) ALL DIMENSIONS IN INCHES
- 6) WELD PER DART QSI 004
- 7) IDENTIFY ON INSIDE SURFACE AS INDICATED USING FINE POINT PERMANENT INK MARKER:
"TCCA-PDA, DART AEROSPACE LTD., P/N D3319-3 B/N BXXXXX,
FOR PRODUCT ELIGIBILITY SEE PDA05-18"

RELEASED FOR REFERENCE ONLY

DART



RELEASED
(05 01 30)



REFERENCE ONLY

DESIGN	DRAWN BY	DART AEROSPACE LTD
P11	P11	HAMKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO.
		D3319
DATE	TITLE	SCALE
05.06.06	WEARPLATE	1:8
A	04.09.24	NEW ISSUE
B	05.06.06	WIDEN HOLES, REDUCE WIDTH -3/-5/-7

- D3319-1 WEARPLATE
- 1) MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A1008 OR CSA G40-21, 38W/44W/50W/60W/70W SERIES STEEL 18 GAUGE (0.048 THICK)
 - 2) FINISH: POWDER COAT GREY SANDTEX (REF.4.3.5.6) PER DART QSI 005 4.3
 - 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) PART IS SYMMETRICAL ABOUT CENTERLINE
 - 5) ALL DIMENSIONS IN INCHES
 - 6) WELD PER DART QSI 004
 - 7) IDENTIFY ON INSIDE SURFACE AS INDICATED USING FINE POINT PERMANENT INK MARKER:
"TCCA-PDA, DART AEROSPACE LTD., P/N D3319-1 B/N BXXXXX, FOR PRODUCT ELIGIBILITY SEE PDA05-18"